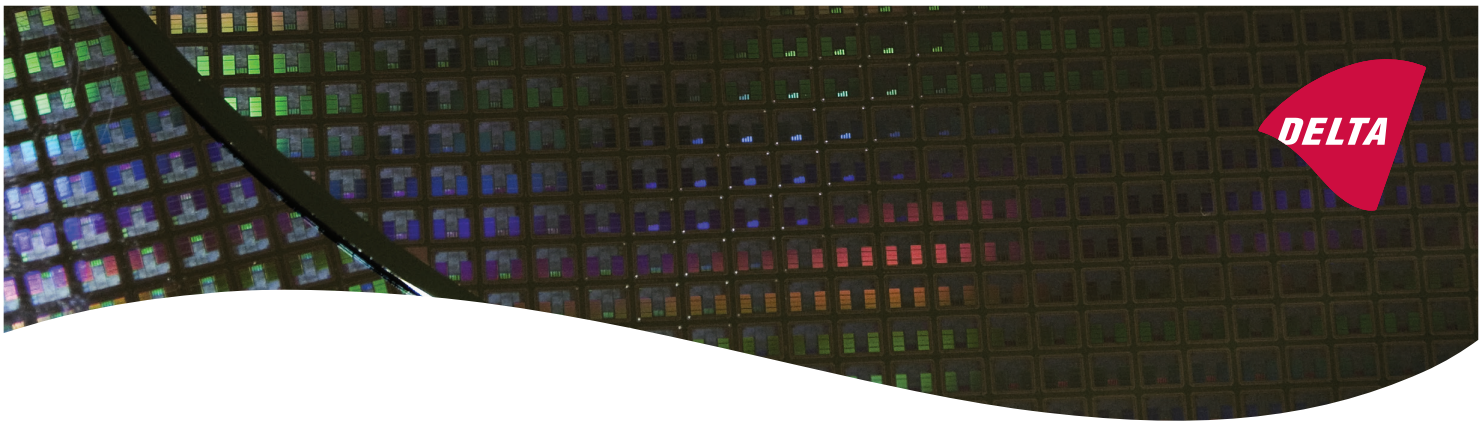


ASIC/IC - Debugging and Troubleshooting

Sub-micron probe station

At DELTA we have the competences and powerful tools to assist you in revealing why the ASIC/IC design does not work and locate the failure site. Possible causes of failure are ESD handling damages, ASIC/IC design errors or bad wafer processing.

Services

IC-debugging

- Hot spot analysis
- Line probing
- Line cuts - isolate circuits
- Leak current detection
- Leak current measurements

Probing

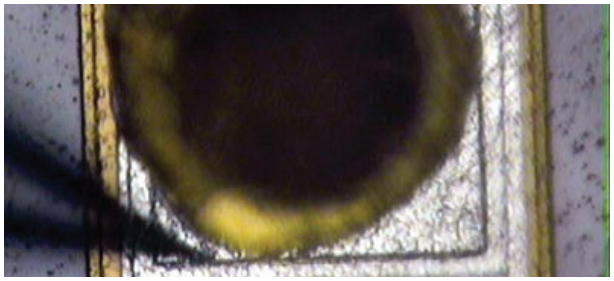
- Semi-automatic
- Wafer probing
- Probing by probe card
- Pad probing
- Line probing

Laser trimming

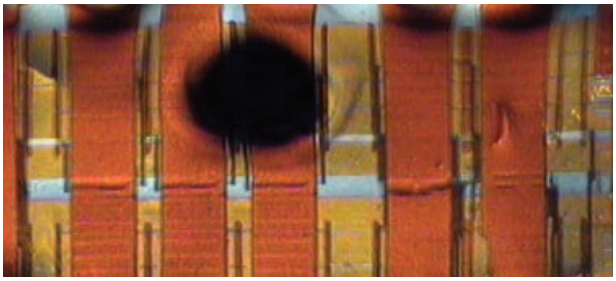
- Resistor trimming
- Capacitor trimming
- Fine trimming of thin-film
- Local depassivation
- Polyimid removal
- Micro-preparation of thin-film

Other

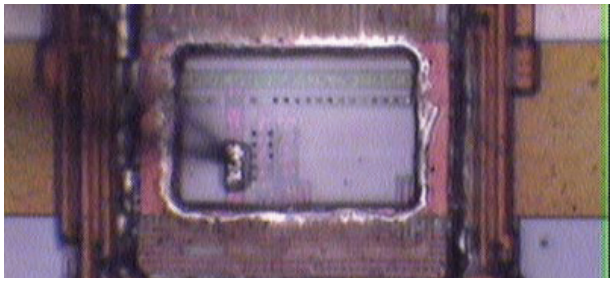
- FIB preparation
- Chip measurements
- Prototype assembly
- Wire bonding
- Etc., etc.



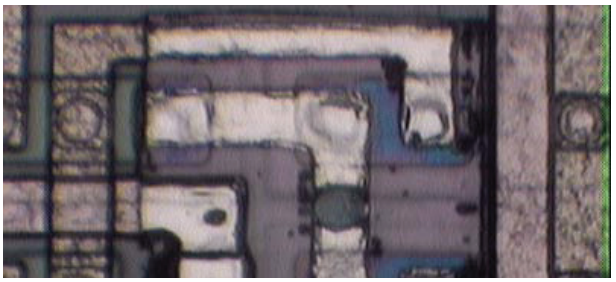
Probing - Probing on bond pad without touching the wire bond.



Hot spot analysis - Hot spot detected by use of liquid crystals.

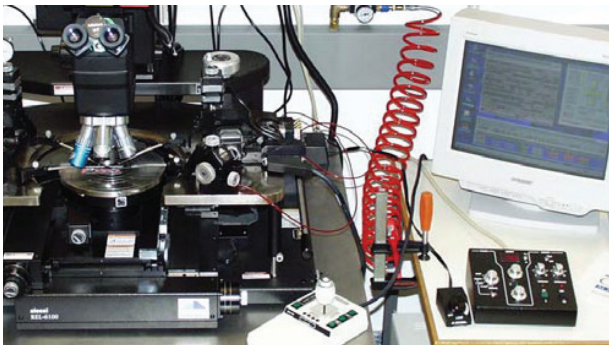


Line probing - 0.6 micron probe tip at depassivated bottom metal line.



Line cut - Removal of glassivation and cut of metal line.

Together with the equipment in our laboratory and the experience of our team, the ALESSI REL-6100 probe station, with laser and micropositioners, is a powerful tool when debugging any type of integrated circuits. The laser can open top glassivation for direct line probing and it can cut lines to bypass parts of the circuit. The probe station is also very suitable for detection of leak current by the use of liquid crystals, the so-called "Hot Spot Analysis".



ALESSI REL-6100 semi-automatic sub-micron probe station.

Technical details

ALESSI REL-6100 probe station	Resolution Repeatability Work area Magnification	0.1 µm 1 µm 8 inch (200 mm) 20 - 1000X
Mitutoyo microscope		
2MS1 programmable micropositioners	Speed Resolution	1 mm/sec. 0.1 µm
2MH2-B manual micropositioners	Repeatability Resolution	1 µm 1 µm
EzLaze	Min. cut size Wavelength	1x1 µm 532 nm / 2 mJ / 5 ns 355 nm / 2 mJ / 4 ns
	Pulse	5 Hz in 10 sec. or 1 Hz continues
0.6 micron probe needles Mounting of probe cards Digital photos on cd or by e-mail		

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